

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-17. (Canceled)

18. (Currently Amended) A method for generating a stereographic image comprising:

a calculating step of calculating Z-values of each pixel based on only image data for that pixel, the pixels forming an image, each Z-value being assigned to a pixel, and each Z-value representing a depth of an object corresponding to the pixel;

an adjusting step of adjusting a Z-value of a target pixel obtained in said calculating step using a Z-value of at least one individual pixel other than the target pixel; and

a generating step of determining an amount of displacement of a the target pixel on the basis of an adjusted Z-value of the target pixel, and displacing the target pixel horizontally by the determined amount, to generate images for the right and the left-eyes-
eyes, wherein:

in said calculating step the Z-value of each target pixel is obtained by adding predetermined weights to color components of image data of the target pixel, and

in said adjusting step:

the Z-values of each pixel are adjusted so that a single step available for a Z-value of a pixel corresponding to an object located backward in an original image express deeper depth than a single step available for a Z-value of a pixel corresponding to an object located forward in the original image;

an average of Z-values of all pixels within an area which includes the target pixel is obtained;

the Z-value of the target pixel is replaced by the obtained average;

a step size of quantization of the Z-value is determined based on a value of a parameter specified by a user; and

either an upper limit or a lower limit of the calculated Z-value is determined based on the value of the parameter specified by the user.

19. (Canceled)

20. (Currently Amended) The method of ~~Claim 19~~, Claim 18, wherein the weights are determined based on the ratio of cone cells sensitive of R, G, and B, respectively, which cones exist in a retina of a human eye.

21. (Canceled)

22. (Previously Presented) The method of Claim 18, wherein in said adjusting step:

tendency of Z-values of pixels in the image is analyzed by comparing a Z-value of a pixel within an area with a Z-value of a pixel within another area; and

when a result of the analysis agrees with a predetermined condition, a quantitative relation between the amount of displacement of the target pixel and the Z-value of the target pixel is reversed in said generating step.

23. (Canceled)

24. (Previously Presented) The method of Claim 18 wherein in said adjusting step:

a distribution of the Z-values of all pixels in the image and an average of all pixels in the image are obtained; and

deviation of the distribution is corrected using the obtained average.

25. (Previously Presented) The method of Claim 18, wherein in said adjusting step:

at least one object in the image represented by the image data is identified referring to Z-values of pixels calculated in said calculating step; and

a Z-value of the target pixel is adjusted on the basis of a Z-value of a pixel located within an area corresponding to the identified object.

26-27. (Canceled)

28. (Previously Presented) The method of Claim 18, further comprising a step of obtaining moving images comprised of a plurality of images, and wherein a stereographic image is generated from each image, to generate stereographic images corresponding to the moving images in real time.

29. (Currently Amended) A stereographic image generating apparatus for generating a stereographic image comprising:

a calculating means for calculating Z-values of each pixel based on only image data for that pixel, the pixels forming an image, each Z-value being assigned to a pixel, and each Z-value representing a depth of an object corresponding to the pixel;

an adjusting means for adjusting a Z-value of a target pixel obtained in said calculating means using a Z-value of at least one individual pixel other than the target pixel; and

a generating means for determining an amount of displacement of ~~a~~ the target pixel on the basis of an adjusted Z-value of the target pixel, and displacing the target pixel horizontally by the determined amount, to generate images for the right and the left ~~eyes~~. eyes, wherein:

said calculating means obtain the Z-value of each target pixel by adding predetermined weights to color components of image data of the target pixel, and

said adjusting means:

adjust the Z-values of each pixel so that a single step available for a Z-value of a pixel corresponding to an object located backward in an original image express deeper depth than a single step available for a Z-value of a pixel corresponding to an object located forward in the original image;

obtain an average of Z-values of all pixels within an area which includes the target pixel;

replace the Z-value of the target pixel by the obtained average;

determine a step size of quantization of the Z-value based on a value of a parameter specified by a user; and

determine either an upper limit or a lower limit of the calculated Z-value based on the value of the parameter specified by the user.

30. (Currently Amended) The apparatus of Claim 29, further comprising an obtaining means for obtaining from ~~a the~~ user ~~a parameter~~ the parameters used in said adjusting means.

31-32. (Canceled)

33. (Previously Presented) The apparatus of Claim 30, further comprising:
storing means for storing image data for the right and the left eyes; and
displaying means for displaying an image represented by the image data stored in said storing means in compliance with a predetermined scheme.

34. (Currently Amended) A computer program product for causing a computer to function as:

a calculating means for calculating Z-values of each pixel based on only image data for that pixel, the pixels forming an image, each Z-value being assigned to a pixel, and each Z-value representing a depth of an object corresponding to the pixel;

an adjusting means for adjusting a Z-value of a target pixel obtained in said calculating means using a Z-value of at least one individual pixel other than the target pixel; and

a generating means for determining an amount of displacement of a target pixel on the basis of an adjusted Z-value of the target pixel, and displacing the target pixel horizontally by the determined amount, to generate images for the right and the left eyes, wherein:

said calculating means obtain the Z-value of each target pixel by adding predetermined weights to color components of image data of the target pixel, and

said adjusting means:

adjust the Z-values of each pixel so that a single step available for a Z-value of a pixel corresponding to an object located backward in an original image express deeper depth than a single step available for a Z-value of a pixel corresponding to an object located forward in the original image;

obtain an average of Z-values of all pixels within an area which includes the target pixel;

replace the Z-value of the target pixel by the obtained average;

determine a step size of quantization of the Z-value based on a value of a parameter specified by a user; and

determine either an upper limit or a lower limit of the calculated Z-value based on the value of the parameter specified by the user.